

Amendments to the Specification

1. Please replace the paragraph beginning at page 1, line 3, with the following rewritten paragraph:

A1
~~An Appendix of computer program source code is included herewith. The Appendix is hereby expressly incorporated herein by reference, and contains material which is subject to copyright protection as set forth above. A compact disc appendix is included containing computer program code listings pursuant to 37 C.F.R. 1.52(e) and is hereby incorporated herein in its entirety by this reference. The total number of compact discs is 1 including 58,306 bytes. The compact disc includes one file created September 8, 2003 entitled "Source Code Appendix for USSN 09-575,894." The compact disc appendix replaces the Source Code Appendix filed with the patent application on May 22, 2000 and included in the specification at pages A1-A38.~~

1. Please replace the paragraph beginning at page 1, line 13, with the following rewritten paragraph:

A2
The present invention relates generally to a method and system for generating a search result list, for example, using an Internet-based search engine. More particularly, the present invention relates to a method and system for generating search results from a pay for placement performance database and generating a list of related searches from a related search database.

2. Please replace the paragraph beginning at page 2, line 9, with the following rewritten paragraph:

A3
One type of search engine that provides web page operators with a more predictable method of being seen as the result of a search is a "pay for placement performance" arrangement where web pages are displayed based at least in part upon a monetary sum that the advertiser or web page operator has agreed to pay to the search engine operator. The web page operator

A3
agrees to pay an amount of money, commonly referred to as the bid amount, in exchange for a particular position in a set of search results that is generated in response to a user's input of a search term. A higher bid amount will result in a more prominent placement in a set of search results. Thus, a web page operator may attempt to place high bids on one or more search terms to increase the likelihood that their web page will be seen as a result of a search for that term. However, there are many similar search terms, and it is difficult for a web page operator to bid on every potentially relevant search term. Likewise, it is unlikely that a bid will be made on every search term. Accordingly, a search engine operator may not receive any revenue from searches performed using certain search terms for which there are no bids.

3. Please replace the paragraph beginning at page 3, line 6, with the following rewritten paragraph:

A4
By way of introduction only, in accordance with one embodiment of the invention, a search request is received from a searcher and used to perform a search on a pay for placement ~~performance~~ database. In the pay for placement ~~performance~~ database there are stored search listings including web page locators and bid amounts to be paid by the operator of the listed web page. The search using the pay for placement ~~performance~~ database produces search results which are presented to the searcher. The search request is also used to perform a search on a related search database. The related search database has been formed at least in part using contents of the pay for placement ~~performance~~ database. The search of the related search database produces a list of related searches which are presented to the searcher.

4. Please replace the paragraph beginning at page 3, line 16, with the following rewritten paragraph:

A5
In accordance with a second embodiment, a related search database is created using a pay for placement ~~performance~~ database. All text from all web pages referenced by the pay for placement ~~performance~~ database is stored and used to create an inverted index. Additional

A5
indexes are used to improve the relevancy and spread of related search results obtained using the database.

5. Please replace the paragraph beginning at page 4, line 15, with the following rewritten paragraph:

A6
The database search system 100 includes a pay for placement ~~performance~~ database 104, a related searches database 106, a search engine web server 108, a related searches web server 110 and a search engine web page 114. The servers 104, 106, 108 may be accessed over the network 102 by an advertiser web server 120 or a client computer 122.

6. Please replace the paragraph beginning at page 7, line 6, with the following rewritten paragraph:

A7
Search engine web server 108 is connected to the network 102. In one embodiment of the present invention, search engine web server 108 includes a pay for placement ~~performance~~ database 104 including a plurality of search listings. The database 104 contains an ~~and~~ ordered collection of search listing records used to generate search results in response to user queries. Each search listing record contains the URL of an associated web page or document, a title, descriptive text and a bid amount. In addition, search engine web server 108 may also be connected to the account management server 112. The account management server 112 may also be connected to the network 102.

7. Please replace the paragraph beginning at page 7, line 15, with the following rewritten paragraph:

A8
In addition, in the illustrated embodiment of FIG. 1, the database system 100 further includes a related searches web server 110 and an associated related searches database 106. The related searches web server 110 and data base 106 operate to provide suggested, related searches for presentation to a searcher along with search results in response to his query. Users

A8
conducting searches for information using a search engine web server such as the server 108 often perform searches which are inappropriately focused as compared to the index data of the web site search engine. Users may use search terms which are either too to vague and generalized, such as "music," or too specific and focused, such as "hot jazz from New Orleans during the early 1950s." Some users require assistance to refine their query to better obtain useful information from the search engine. The related searches web server 110 provides the user with query suggestions better suited to the abilities of the pay for placement performance database 104.

8. Please replace the paragraph beginning at page 7, line 15, with the following rewritten paragraph:

A9
In the illustrated embodiment, the pay for placement performance database 104 is established in conjunction with advertisers who operate web servers such as advertiser web server 120. Advertiser web pages 121 are displayed on the advertiser web server 120. An advertiser or web site promoter may, through an account residing on the account management server 112, participate in a competitive bidding process with other advertisers. An advertiser may bid on any number of search terms relevant to the content of the advertiser's ~~advertisers~~ web site.

9. Please replace the paragraph beginning at page 8, line 23, with the following rewritten paragraph:

A10
The searcher may click on HyperText links associated with each listing in that search result page to access the corresponding web pages. The HyperText links may access web pages anywhere on the Internet, and include paid listings to advertiser web pages 121 located on the advertiser web server 120. In one embodiment of the present invention, the search result list also includes non-paid listings that are not priced as a result of advertiser's bids and are generated by a conventional search engine, such as the Inktomi, Lycos, or Yahoo! search engines. The non-paid HyperText links may also include links manually indexed into the pay for placement

A10
performance database 104 by an editorial team. Preferably, the non-paid listings follow the paid advertiser listings on the search results page.

10. Please replace the paragraph beginning at page 9, line 3, with the following rewritten paragraph:

A11
Related searches web server 110 receives the search request from the searcher at client computer 122 as entered using the search engine web page 114. In the related searches database 106, which includes related search listings generated from the pay for placement ~~performance~~ database 104, the related searches web server 110 identifies related search listings relevant to the search request. In conjunction with the search engine web server 108, the related searches web server 110 returns a search result list to the searcher including the identified search listings located in the pay for placement ~~performance~~ database and one or more identified related search listings located in the related searches database 106. Operation of the related searches web server 110 in conjunction with the related searches database 106 will be described below in conjunction with FIGS. 2-5. The formation of the related searches database 106 will be described below in conjunction with FIG. 6.

11. Please replace the paragraph beginning at page 9, line 16, with the following rewritten paragraph:

A12
FIG. 2 is a flow diagram illustrating a method for operating the database search system 100 of FIG. 1. The method begins at block 200. Java JAVA® programming language source code for implementing the method of FIG. 2 and other method steps described herein is included as an appendix.

12. Please replace the paragraph beginning at page 9, line 26, with the following rewritten paragraph:

A13
After block 202, two parallel processes are initiated. At block 204, the search engine web server of the database search system identifies matching search listings in the pay for placement ~~performance~~ database of the system. In addition, the search engine web server may further identify non-paid search listings.

13. Please replace the paragraph beginning at page 10, line 10, with the following rewritten paragraph:

A14
After the search results have been located, the search results from the pay for placement ~~performance~~ database are combined with search results from the related search database, block 208. At block 210, a search result list is returned to the searcher, for example by displaying identified search listings on the search engine web page and conveying the web page data over the network to the client computer. The search results and related search results may be displayed in any convenient fashion.

14. Please replace the paragraph beginning at page 12, line 9, with the following rewritten paragraph:

A15
Referring now to FIG. 4, the act of identifying matching related search listings in a related search database (act 206, FIG. 2) in one embodiment comprises the following acts. At block 400, an inverted index containing all data from all web pages contained in the pay for placement ~~performance~~ database of the database search system is searched. The inverted index is stored in the related searches database. In an inverted index, a single index entry is used to reference many database records. Searching for multiple matches per index entry is generally faster when using inverted indexes, since each index entry may reference many database records. The inverted index lists the words which can be searched in, for example, alphabetical order and accompanying each word are pointers which identify the particular documents which contain the word as well as the locations within each document at which the word occurs. To perform a search, instead of searching through the documents in word order, the computer locates the pointers for the particular words identified in a search query and processes them. The computer

A15 identifies the documents which have the required order and proximity relationship for the search query terms.

15. Please replace the paragraph beginning at page 13, line 1, with the following rewritten paragraph:

A16 Meta-information is obtained using a script of command to analyze the pay for placement ~~performance~~ data base and determine information and relationships present in the data. The meta-information is collected for each row of data in the database and attached to that row. In one embodiment, the script is run one time as a batch process after the data is collected in the database. In other embodiments, the script is periodically re-run to update the meta-information.

16. Please replace the paragraph beginning at page 13, line 7, with the following rewritten paragraph:

A17 Meta-information about the web pages and key words contained in the pay for placement ~~performance~~ database includes information such as the frequency of occurrence of similar key words among different web site domains and the number of different key words associated with a single web site. The meta-information may further include fielded advertiser data which is the information contained in each search listing provided by web site promoters who have bid upon search terms in the pay for placement ~~performance~~ database; advertiser identification information; web site themes, such as gambling or adult content; [[,]] and derived themes. Preferably, the meta-information is combined in a common inverted index with the stored web page data searched at block 400.

17. Please replace the paragraph beginning at page 13, line 17, with the following rewritten paragraph:

A18 The result of the searches of block 400 and block 402 is a listing of rows of the inverted index or indexes containing the searched information. Each row contains the information

A18
associated with a search listing of the pay for placement ~~performance~~ database along with all the text of the web page associated with the search listing. In the illustrated embodiment, the search listing includes the advertiser's search terms, the URL of the web page, a title and descriptive text.

18. Please replace the paragraph beginning at page 14, line 24, with the following rewritten paragraph:

A19
At block 506, it is determined if the located record contains a bidded search term. Search terms are bidded on by advertisers, the bids being used for display of search results by the search engine web server using the pay for placement ~~performance~~ database. If the search result does include a bided on search term, the relevancy of the record is adjusted, block 508. If the query does not include one or more bided on search terms, control proceeds to block 510.

19. Please replace the paragraph beginning at page 15, line 10, with the following rewritten paragraph:

A20
At block 518, it is determined if the search terms are included in the metatags of the search listing. Metatags are textural information included in a web site which is not displayed for user use. However, the search listing contained in the pay for placement ~~pay for performance~~ database includes the metatags for searching and other purposes. If, at block 518, the search terms are not included in the search listing, control proceeds to block 522. On the other hand, if the search terms are included in one or more metatags of the search listing, at block 520 the relevancy of the record is adjusted accordingly.

20. Please replace the paragraph beginning at page 15, line 22, with the following rewritten paragraph:

A21
Following the steps illustrated in FIG. 5, one or more and preferably six most relevant related search listings are returned and presented to the searcher along with the search results from the pay for placement ~~pay for performance~~ database.

21. Please replace the paragraph beginning at page 15, line 27, with the following rewritten paragraph:

A22
At block 602, all text for all web pages in the pay for placement ~~pay for performance~~ database is fetched. This includes metatags and other non-displayed textual information contained in the web page referenced by a URL contained in the pay for performance database. At block 604, text from similar pages is omitted. This reduces the amount of data which must be processed to form the related searches database. One embodiment of a method for performing this act will be described below in conjunction with FIG. 7. In addition, this greatly increases the speed at which the related searches database may be produced. At block 606, the text is stored in the related searches database.

22. Please replace the paragraph beginning at page 17, line 4, with the following rewritten paragraph:

A23
In one embodiment, the inverted index which is queried against to obtain the related results is created with the following JAVA® programming language ~~Java~~ command:

23. Please replace the paragraph beginning at page 18, line 11, with the following rewritten paragraph:

A24
At block 702, the pay for placement ~~performance~~ database (also referred to as a bidded search listing data base) is examined for URL data and all URLs are extracted from the database and formed into a list. The list is sorted and any exact duplicates are removed, block 704.

24. Please replace the paragraph beginning at page 19, line 26, with the following rewritten paragraph:

A25
From the foregoing, it can be seen that the present invention provides an improved method and apparatus for producing related searches for presentation to a searcher searching in a pay for placement ~~performance~~-database. Related searches are performed in a related searches database which has been formed using the pay for placement ~~performance~~ database. The search results from the related searcher's database are ordered by relevancy for presentation to the user. Thus, if a user's initial search was too narrow or too broad, the user has available related searches which may be used to produce more usable results. In addition, the related searches have been produced using search listings referenced by bidded search terms. This provides a benefit to advertisers who pay for advertising in the database search system. This increases the likelihood that an advertiser's web site will be visited by a searcher using the database system.

24. Please cancel from the Specification pages A1 through A38 inclusive. The subject matter contained in the source code appendix is moved to the compact disc appendix filed with this Amendment.

25. In the Abstract, please substitute the Abstract on the following replacement page for the Abstract filed with the application. In the attached replacement page, two instances of the recitation "pay-for-performance" have been replaced by the words "pay for placement."

Attachment: Replacement sheet.